

**For Immediate Release:**

## **Daniel Boone: a Pioneer in Clean, Green, Renewable Energy**

*Daniel Boone High School Students Build Algae Bio Reactor for Algae to Diesel Fuel Research Project*

**Birdsboro, PA, October 21, 2013** – Daniel Boone High School students are following in their namesake's path by becoming explorers in a new frontier. However, their explorations are taking place not in geographic areas but in the field of Clean, Green, Renewable energy. In an effort to educate students on energy related issues and to help motivate students to pursue careers in Science, Technology, Engineering, and Mathematics (STEM) fields, Daniel Boone High School Science Teachers initiated an extracurricular research project intended to prepare its students for this exciting and emerging field thereby helping to address and to alleviate future energy shortages.

In the first year of the project, Daniel Boone Physics students constructed an Algae Bio Reactor that will eventually grow large quantities of algae to be dried and pressed in order to harvest the algae lipid oil. This oil will later be chemically processed into Biodiesel. This year Daniel Boone Science Students will grow algae in bulk, perform research in order to determine the best lighting conditions and nutrient requirements needed to maximize algae yields, and extract and process the lipid oils into small quantities of biodiesel fuel. In addition to these goals, Daniel Boone High School students from Physics, Chemistry, and Biology courses have formed a nine member team in order to compete in the Scholastic/Lexus Eco Air and Climate Challenge. The Lexus Eco Challenge is a life-changing opportunity for teens across the nation to make a difference in the environmental health of our planet, one community at a time. More information about this challenge may be obtained at the following web page: <http://lexus.scholastic.com/challenges>

The team consisting of Ian Kurtz, Elizabeth Levy, Stephanie Sievers, Megan Jolivette, Courtney Vidovich, Dan Downs, John Dugan, Alex Doyle, and Noah Coats under the advisement of Physics Teachers Mr. Shannon W. Helzer and Mr. Sid Harwood have quite a challenge ahead of them. The competing teams registered on October 14, 2013, and must submit their final project, an informational power point brief, by the close of business on November 11, 2013. One of the primary goals of the challenge is to educate the local community on an environmental issue that impacts the team's community. The topic chosen by the Daniel Boone Team (*Go Clean, Go Green, Gooooo Algae*) is renewable energy. Algae are currently a hot area in newly developing, renewable energy. Initial research indicates that Algae alone could provide a very high percentage of America's fuel related needs far surpassing corn produced ethanol. As a biofuel feedstock, corn is capable of producing 420 gallons of fuel per year per acre. Algae, on the other hand, is capable of producing over 5000 gallons of fuel per year per acre.

In order to achieve the Challenge's requirement to educate the local community, the team members are producing a series of videos that will eventually provide instructions on how to do everything from constructing the bioreactor to making the biodiesel fuel. In addition to the video collection, the team will be hosting an evening event on November 6, 2013, at 6:00 PM. Various members of the press, parents, members of the local professional community, local college professors, school district officials, and community leaders including State Senator Judith Schwank, State Representative David Maloney, and Birdsboro Mayor Robert M. Myers have been invited to attend. During this evening's event, some of the visiting dignitaries will be clothed in lab gear and asked to actually handle the algae and to transform vegetable oil (a temporary substitute until a significant quantity of algae lipid oil is available) into diesel fuel.

## **About Daniel Boone High School**

The Daniel Boone Area School District is located about 45 miles northwest of Philadelphia, PA along the southern border of Berks County, within 15 minutes of Reading, PA to the north. The district serves a population of approximately 18,500 people and covers an area of 42 square miles. The district is predominately rural/suburban. One high school, one middle school, and three elementary buildings service a student population of approximately 3,650 students.

<http://www.dboone.org/schools/highschool/Pages/Home.aspx>

Please use the contact information below to RSVP to this event:

### **Contact**

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Event Page: <http://www.dboone.org/teachers/Sid%20Harwood/Pages/ECOCh.aspx>

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